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EXAMINER

B3M1/0910

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ART UNIT	PAPER NUMBER
2316	2

DATE MAILED:

09/10/93

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

☑ This application has been examined   ☑ Responsive to communication filed on 7/17/91   ☐ This action is made final.

A shortened statutory period for response to this action is set to expire ___3___ month(s), ___0___ days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned.   35 U.S.C. 133

Part I   THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

1. ☑ Notice of References Cited by Examiner, PTO-892.   2. ☑ Notice re Patent Drawing, PTO-948.
3. ☐ Notice of Art Cited by Applicant, PTO-1449.   4. ☐ Notice of informal Patent Application, Form PTO-152.
5. ☐ Information on How to Effect Drawing Changes, PTO-1474.   6. ☐ _____

Part II   SUMMARY OF ACTION

1. ☑ Claims ___1-18___ are pending in the application.

    Of the above, claims _____ are withdrawn from consideration.

2. ☐ Claims _____ have been cancelled.

3. ☐ Claims _____ are allowed.

4. ☑ Claims ___1-18___ are rejected.

5. ☐ Claims _____ are objected to.

6. ☐ Claims _____ are subject to restriction or election requirement.

7. ☐ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.

8. ☐ Formal drawings are required in response to this Office action.

9. ☐ The corrected or substitute drawings have been received on _____ . Under 37 C.F.R. 1.84 these drawings are ☐ acceptable. ☐ not acceptable (see explanation or Notice re Patent Drawing, PTO-948).

10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on _____ has (have) been ☐ approved by the examiner. ☐ disapproved by the examiner (see explanation).

11. ☐ The proposed drawing correction, filed on _____ , has been ☐ approved. ☐ disapproved (see explanation).

12. ☐ Acknowledgment is made of the claim for priority under U.S.C. 119. The certified copy has ☐ been received ☐ not been received ☐ been filed in parent application, serial no. _____ ; filed on _____ .

13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.

14. ☐ Other

EXAMINER'S ACTION

1.   The disclosure is objected to because of Informal Drawings-

CK   see PTO-948.

2.   The title of the invention is not descriptive and imprecise.

A new title is required which should include more claimed

features which differentiate the claimed invention from the Prior

Art.   The main idea or the improvement of the present invention

should be reflected within twenty words.   Specifically, the title

OK   should stress the use of 'proxy' objects in addition to the

translation of a 'language-based' message to an 'operating

system-based' message.   In general, the title should cite a

method of message passing.

3.   The disclosure is objected to because of the following

informalities:

? —→X (a)   In figure 1, blocks 101,102,103 & 104 are not labelled.

    ok (b)   Figures 6,7 & 8b are not labelled as prior art.

Appropriate correction is required.

4.   The following is a quotation of the first paragraph of 35

U.S.C. § 112:

        The specification shall contain a written description of the
        invention, and of the manner and process of making and using
        it, in such full, clear, concise, and exact terms as to
        enable any person skilled in the art to which it pertains,
        or with which it is most nearly connected, to make and use
        the same and shall set forth the best mode contemplated by
        the inventor of carrying out his invention.

The specification is objected to under 35 U.S.C. § 112,
first paragraph, as failing to adequately teach how to make
and/or use the invention, i.e. failing to provide an enabling
disclosure. It is unclear how a receiver object determines
whether it has been given all the information it needs to execute
a message, in order to determine if a query must be generated and
sent back to the sender object. On p.22, paragraph 4, the
specification cites that the present invention supports this
feature, but does not fully disclose it. This rejection goes
hand in hand with section (c) of the following 35 U.S.C. § 112,
second paragraph rejection. This feature must be fully
disclosed.

5.   Claims 5-7, 11-18 are rejected under 35 U.S.C. § 112, first
paragraph, for the reasons set forth in the objection to the
specification.

stands

6.   Claims 1-18 are rejected under 35 U.S.C. § 112, second
paragraph, as being indefinite for failing to particularly point
out and distinctly claim the subject matter which applicant
regards as the invention. The following claim language is
unclear, vague and/or indefinite:

    (a) as per claims 1,2,5,6 & 11, it is unclear who or what
is executing these steps. If they are executed by a computer,
this must be explicitly stated within the context of the claims,

and the steps involving 'providing' must be clarified in relation
to a computer actually implementing these steps. A computer
'providing' something is not a common art term. It appears to
the examiner that these steps do not actually contribute to the
claimed method of message sending.

(b)   as per claims 2-10, they are rejected because they
depend from previously rejected claim 1. In addition, claims 8 &
9 add irrelevant limitations to the claims from which they
depend. Of what relevance is the use of C and Mach to the method
of claim 1?

(c)   as per claims 5 & 6, it is unclear how the steps of
claim 5 fit into the steps of claim 2, and how the steps of claim
6 fit into the steps of claim 5. Are the steps of these claims
executed directly after those of the claim from which they
depend? Are they executed every time a message is sent? These
seem to be steps which only occur under certain conditions, i.e.
the second object needs further information from the first
object. This claim must be clarified in conjunction with the
above 35 U.S.C. § 112, first paragraph rejection.

(d) as per claims 12-18, they are rejected because they
depend from previously rejected claim 11. In addition, claims 15
& 16 add irrelevant limitations to the claims from which they
depend. Of what relevance is the use of C and Mach to the method
of claim 11?

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7.   The following is a quotation of the appropriate paragraphs
of 35 U.S.C. § 102 that form the basis for the rejections under
this section made in this Office action:

A person shall be entitled to a patent unless --

(a) the invention was known or used by others in this
country, or patented or described in a printed publication
in this or a foreign country, before the invention thereof
by the applicant for a patent.

(b) the invention was patented or described in a printed
publication in this or a foreign country or in public use or
on sale in this country, more than one year prior to the
date of application for patent in the United States.

(e) the invention was described in a patent granted on an
application for patent by another filed in the United States
before the invention thereof by the applicant for patent, or
on an international application by another who has fulfilled
the requirements of paragraphs (1), (2), and (4) of section
371(c) of this title before the invention thereof by the
applicant for patent.

8.   Claims 1-4, 8-10 are rejected under 35 U.S.C. § 102(a),(b) &

(e) as being anticipated by McCullough, "Transparent Forwarding:

First Steps", OOPSLA '87 Proceedings: Conference on Object

Oriented Programming, Systems, Languages, and Applications,

pp.331-341, 12/1987, and Bennet, "The Design and Implementation

of Distributed Smalltalk", OOPSLA '87 Proceedings: Conference on

Object Oriented Programming, Systems, Languages, and

Applications, pp. 318-330, 12/1987. McCullough and Bennet both

teach all that is claimed in these claims.

As stated in the 'BACKGROUND ART' section of the

specification, p. 10, paragraph 3, and in the reference,

McCullough clearly teaches the use of a 'ProxyObject' and

translation (encoding/decoding) of the message before and after

transmission. This is taught in both directions, i.e. sending

the message and the result. The translation from a language-

based message into an operating system-based message is shown in

the use of the **doesNotUnderstand:** primitive, the creation of an

Ethernet packet, and the linearization of the arguments to the

message. These features clearly indicate a system-dependent form

of the message which is transmitted to the receiver object. This

system-dependent form is then decoded, the message extracted, and

the message executed by the receiver object. The result is then

transmitted back to the sender in the same manner.

Bennet teaches a similar method of translation. His method

includes the use of the **doesNotUnderstand:**, **perform:**, and

remoteSend: primitives, a 'RemoteObjectTable' which uses a

'messageProcess' to construct a messageArray, and the encoding of

an 'argument string'. These features also indicate a system-

dependent form which is used during the transmission of the

message.

Claims 3 & 4 do not contribute to making the claimed

invention distinct from the prior art. The limitation, in claim

3, that the message comprises a method and an argument, is

disclosed by Applicant in the 'BACKGROUND ART' section of the

specification, p.1, lines 21-25, and is common in the art. It is

also understood in the art that executing a message comprises

executing the given method on the given argument, as described in

claim 4.

Claims 8-10 do not make the claimed invention distinct from the prior art. Regarding claims 8 & 9, see the above 35 U.S.C. § 112, second paragraph rejection. Regarding claim 10, this limitation is understood in the general understanding of the 'proxy' concept.

9.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Quan, U.S. Pat. No. 5,230,051 discloses a distributed messaging system.

Simor, U.S. Pat. No. 5,060,150 discloses a message-based operating system.

Shapiro, "The Design of a Distributed Object-Oriented Operating System for Office Applications", ESPRIT '88. Putting the Technology to Use. Proceedings of the 5th Annual ESPRIT Conference, pp. 1020-7, vol. 2, Nov. 1988.

10.   A shortened statutory period for response to this action is set to expire 3 (three) months, 0 (zero) days from the mail date of this letter. Failure to respond within the period for response will cause the application to become ABANDONED according to 35 U.S.C. 133, M.P.E.P. 710.02, 710.02(b).

11.   Any inquiry concerning this communication or earlier

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communications from the examiner should be directed to Matthew Payne whose telephone number is (703) 305-9593.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-9600.

KEVIN A. KRIESS
PRIMARY EXAMINER
GROUP 2300

September 7, 1993